

CLAIMS

What is claimed is:

- 5           1. A method of treating a respiratory distress syndrome in a mammal, comprising administering a therapeutically effect amount of an agent that activates surfactant secretion in said mammal.
- 10           2. The method of **Claim 1**, wherein said therapeutic agent is at least one intracellular calcium chelator.
3. The method of **Claim 2**, wherein said intracellular calcium chelator is BAPTA-AM.
- 15           4. The method of **Claim 3**, wherein BAPTA-AM is between 25 and 100  $\mu\text{M}$ .
5. The method of **Claim 1**, wherein said agent comprises inducing an enhanced secretion of surfactant from type II pneumocytes.
- 20           6. The method of **Claim 1**, wherein said agent acts by altering an endoplasmic reticulum free calcium concentration ( $[\text{Ca}^{+2}]_i$ ) in type II pneumocytes.
7. The method of **Claim 1**, wherein said agent is administered by an aerosol, nebulization or liquid instillation.
- 25           8. A method of inhibiting a respiratory distress syndrome in a mammal, comprising administering a therapeutically effect amount of an agent that activates surfactant secretion in said mammal.
- 30           9. The method of **Claim 8**, wherein said agent comprises at least one intracellular calcium chelator.

10. The method of **Claim 9**, wherein said intracellular calcium chelator is BAPTA-AM.

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11. The method of **Claim 10**, wherein BAPTA-AM is between 25 and 100  $\mu\text{M}$ .

12. The method of **Claim 8**, wherein said agent comprises inducing an enhanced secretion of surfactant from type II pneumocytes.

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13. The method of **Claim 12**, wherein said agent acts by altering an endoplasmic reticulum free calcium concentration ( $[\text{Ca}^{+2}]_i$ ) in type II pneumocytes.

14. The method of **Claim 8**, wherein said agent is administered by an aerosol, nebulization or liquid instillation.

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